General Proposal
for
Professional Services
Relating to
Implementation and Technical Support
of
Computer Systems and Applications

Presented to

American University of Antigua

Suite 1500 – Two Penn Plaza – New York NY 10021

by
Sol Weltman
3161 Brighton 6th Street - #6E
Brooklyn NY 11235
718-646-1574

October 9, 2003

This document, prepared for the benefit of the ***American University of Antigua (the University)*** by ***Sol Weltman (the Presenter)*** is not a comprehensive and detailed recommendation or plan, which can be developed only after extensive study. It is rather a general proposal, presenting an organized overview of the projected Information Technology (I-T) needs of the University in disciplines where the Presenter is deemed to be an experienced professional.

Following are listed several of the broad I-T areas upon which successful management of a high quality for-profit Medical School will rely, in the Presenter's opinion.

1. Student Information System
2. Prospects Information System
3. Reliable Computer Hardware And Networking
4. Computer Anti-Virus Protection
5. Reliable Email
6. Document Imaging Capability
7. Financial Aid Support Software
8. Miscellaneous Other Applications

In the pages following, these broad areas are described in greater detail.

At the conclusion of this proposal is a brief summary.

General Proposal for Professional Services
to
American University in Antigua
October 9, 2003

1. Student Information System

What the University will undoubtedly require, essential to Record Maintenance in any Learning Institution, is an integrated *Student Information System*, providing a compendium of each student's records, including but not limited to the following elements:

A. Address and Contact information
B. Prior Academic History, including Transcript Data
C. Application and Admissions Data
D. Program and Status Information (Prior, Current and Expected)
E. Courses Taken and Grades
F. Billing and payment data
G. Financial Aid Data.
H. USMLE Test Results

For students in Clinical Clerkships, the system should provide, in addition to the above:

I. Clerkship Rotation Start and End Dates
J. Hospital or other Institution of Service
K. Other details pertinent to each Clerkship Rotation
L. Semester / Clerkship relationships

The *Student Information System* provides for:

(a) inquiry by Student ID or name as required to facilitate discussion with student,
(b) entry of data from applications, transcripts and other hard copy, scanned or entered at a computer terminal,
(c) creation of student invoices and periodic statements for mailing,
(d) reports invoked as needed, providing detailed and summary information as required.

While such systems can be purchased "off the shelf" from reputable software companies with price tags of $250,000 and up, it has been found, after examining a number of these systems, that each of these offerings has limitations requiring some form of costly customization. In general, for example, none of these systems is equipped to deal with clinical rotations. Also, the packaged software tends to force a business model, usually entailing hidden costs. For a startup school with limited capital, it makes better business sense to create a system, starting with basic needs and adding capabilities as required. A prudent plan, dictating system requirements, will deter the tendency for a business model to develop around a pre-existing computer system.

2. Prospects Information System

No business entity would consider a marketing plan today without access to telephones or Email. In the same fashion, it would be fruitless to attempt to market to any group without an automated list containing contact and status information, as well as selection criteria.

In the case of college students, the target group poses special problems: prospective applicants are likely to be (a) sharing phones, (b) living away from home, and (c) very difficult to reach. An Open House event, scheduled in a location unlikely from all appearances to be of interest to a particular prospect, might be just the event convenient for the student to attend at the time.

A well-designed *Prospects Information System* will have the data that might make the difference. Additionally, prospect data collected at the University Web Site should be imported to the Prospects Database frequently.

3. Reliable Computer Hardware And Networking

As soon as the *Student Information System* is ready for a production environment, reliable computer hardware should be in place for running the application. In a small office (up to 5 people), a local area network (LAN), may consist of one desktop computer (*Client*) per user, with the database resident on one of the client computers. With this approach, some initial cost savings can be achieved over a plan that includes a server and appropriate software. However, since other applications may benefit substantially from the addition of a server to the network, and ultimately that form of network will be a requirement, it is wise to give consideration to initial installation of a LAN, purchase of a server, and implementation of the *Student Information System on the LAN*, where it will ultimately reside.

The primary concerns in the purchase of this computer hardware are its reliability, serviceability, and ease of maintenance. Needless to say, in a service company, quality of service is severely impacted by periodic unplanned inaccessibility of data.

4. Computer Anti-Virus Protection

An analysis of available anti-virus software, and inclusion of such in your initial installation, is mandatory. The cost of such software is very low both in absolute terms as well as in terms of the protection it affords. Often the computer hardware may already be equipped with high quality anti-virus software by the manufacturer. In such cases the task reduces to devising a meaningful scanning schedule.

5. Reliable Email

While individual users can communicate with one another using AOL Web Mail for as little as $4.95 per month, the Bulk Email required as part of a marketing effort, exemplified by the notification of prospects of an Open House event, is not practical without a fully implemented version of MS Outlook, operating through a server running MS Exchange or equivalent. An ancillary benefit of the of an Email software installation is virtual instantaneous internal written communication, including audible annunciation of incoming email.

6. Document Imaging Capability

With the ever-decreasing cost of computer disk storage, and the high speed and reliability of today's document scanners, document imaging capability and its application in our modern office environment is worthy of serious study with respect to intermediate-term data storage.

One example of an application of this technology is the smoothing of peaks in data entry situations. Given a hypothetical application, four pages in length, normally entered into a database in a dedicated hour by an experienced data-entry clerk, it can be scanned in a few seconds using document imaging technology, then sent to safe storage immediately as part of a disaster recovery plan. The database record, designed for future expansion, is then loaded with key data elements from the stored image. Those elements not required to reside in the database record (e. g. for future manipulation) can be subsequently viewed from the stored image, which is instantly recallable. When hard copy is needed, it can be printed from the stored image, obviating storage in bulky file cabinets.

7. Financial Aid Support Software

Funders now provide loan delivery support to the typical educational institution to the extent that *roster files* downloaded by the institution from the Internet are converted into machine-readable counterparts, using an application entitled *WhizKid,* industry-wide. If you wish to keep track of your finances electronically, you will need to be able to convert the counterpart *roster file* into the format in which you maintain your data. Such conversion applications, although uncomplicated and straightforward in nature, are not bought "off the shelf" and form an integral part of the educational institution's software library.

8. Miscellaneous Other Applications

One example of other applications based on data collected in the *Student Information System* database is the federal requirement for annual reporting to the IRS of payments to the University by individuals. Within one month of the end of the calendar year, the reporting entity is required to (a) send to the student a summary of payments on IRS Form 1098-T and subsequently (currently by April 1), to (b) transmit electronically a list of students from whom such payments were received. Penalties are assessed by the IRS for failure to meet those reporting requirements.

While there exist service organizations that supply this service based on data developed by the reporting entity, experience has shown that there are advantages in keeping this function "in-house".

Summary and Conclusion

There have been described a number of areas of Information Technology very significant to the University, worthy of further study and in one or more cases, prompt action.

It should be clear that the benefits of a *Student Information System* and of a *Prospect Information System* warrant additional study and definition, at which point costs can be estimated with a reasonable level of accuracy. Some interaction will be required with members of the University to determine what data will be collected by each system and the source of that data. It is reasonable to expect that Items 3, 4 and 5 can be dealt with at a relatively modest cost for study. Item 6, on the other hand, will require more interaction with the University and study of Vendors' offerings. Item 8 was included for informational purposes; it would be premature to explore that item further at present.

The Presenter's recommendations are noted in the accompanying letter.

General Proposal
for
Professional Services
Relating to
Implementation and Technical Support
of
Computer Systems and Applications

Presented to

American University of Antigua

Suite 1500 – Two Penn Plaza – New York NY 10021

by
Sol Weltman
3161 Brighton 6th Street - #6E
Brooklyn NY 11235
718-646-1574

November 9, 2003

This document, prepared for the benefit of the ***American University of Antigua (the University)*** by ***Sol Weltman (the Presenter)*** is not a comprehensive and detailed recommendation or plan, which can be developed only after extensive study. It is rather a general proposal, presenting an organized overview of the projected Information Technology (I-T) needs of the University in disciplines where the Presenter is deemed to be an experienced professional.

This document supersedes any and all prior documents of a similar nature presented to *the University* to *the Presenter.*

Following are listed several of the broad I-T areas upon which successful management of a high quality for-profit Medical School will rely, in the Presenter's opinion.

1. Prospects Information System	Rev. 11/9/03
2. Billing and Payments Tracking Software	"
3. Student Information System	"
4. Reliable Computer Hardware And Networking	"
5. Computer Anti-Virus Protection	"
6. Reliable Email	"
7. Document Imaging Capability	"
8. Financial Aid Support Software	"
9. Miscellaneous Other Applications	"

In the pages following, these broad areas are described in greater detail.

At the conclusion of this proposal is a brief summary.

1. Prospects Information System

No business entity would consider a marketing plan today without access to telephones or Email. In the same fashion, it would be fruitless to attempt to market to any group without an automated list containing contact and status information, as well as selection criteria.

In the case of college students, the target group poses special problems: prospective applicants are likely to be (a) sharing phones, (b) living away from home, and (c) very difficult to reach. An Open House event, scheduled in a location unlikely from all appearances to be of interest to a particular prospect, might be just the event convenient for the student to attend at the time.

A well-designed *Prospects Information System* will have the data that might make the difference. Additionally, prospect data collected at the University Web Site should be imported to the Prospects Database frequently.

In an earlier version of this document the *Prospects Information System* was ranked lower in overall importance than here in this version. After careful consideration, based on the facts that (a) the University has not reduced its target number of students for the end of the first year of operation, and (b) a *Prospects Information System* exists in a form that can be implemented quickly and effectively at relatively low cost to the University, its importance has been elevated in importance to a position above all other listed software items/groups in this proposal.

2. Billing and Payments Tracking Software

While some might consider this software an integral part of the *Student Information System,* and others, with equal justification, might incorporate this software into the needs of an Accounting Department, the *Bursar's Department* traditionally relies on this software group as a foundation for his operations. Common elements between the *Student Information System* and the *Billing and Payments Tracking Software* include the *Applicant or Student ID, Semester and Grades (linking with Registrar), Clinical Rotation Dates (Clinical Department),* and *Payments received from Lenders directly (Financial Aid Department).*

While statements for a small number of students can easily be generated manually with no discernible difference from the product of *Billing and Payments Tracking Software* as to the time it takes to generate invoices for the entire student body in bulk, for example, in the case of 200 students such a task can be run in a very few hours, drawing names and addresses from the *Student Information System*, as well as semester-related data important to the student receiving the statement.

3. Student Information System

What the University will undoubtedly require, essential to Record Maintenance in any Learning Institution, is an integrated *Student Information System*, providing a compendium of each student's records, including but not limited to the following elements:

A. Address and Contact information
B. Prior Academic History, including Transcript Data
C. Application and Admissions Data
D. Program and Status Information (Prior, Current and Expected)
E. Courses Taken and Grades
F. Billing and payment data
G. Financial Aid Data.
H. USMLE Test Results

For students in Clinical Clerkships, the system should provide, in addition to the above:

I. Clerkship Rotation Start and End Dates
J. Hospital or other Institution of Service
K. Other details pertinent to each Clerkship Rotation
L. Semester / Clerkship relationships

The *Student Information System* provides for:

(a) inquiry by Student ID or name as required to facilitate discussion with student,
(b) entry of data from applications, transcripts and other hard copy, scanned or entered at a computer terminal,
(c) creation of student invoices and periodic statements for mailing,
(d) reports invoked as needed, providing detailed and summary information as required.

While such systems can be purchased "off the shelf" from reputable software companies with price tags of $250,000 and up, it has been found, after examining a number of these systems, that each of these offerings has limitations requiring some form of costly customization. In general, for example, none of these systems is equipped to deal with clinical rotations. Also, the packaged software tends to force a business model, usually entailing hidden costs. For a startup school with limited capital, it makes better business sense to create a system, starting with basic needs and adding capabilities as required. A prudent plan, dictating system requirements, will deter the tendency for a business model to develop around a pre-existing computer system.

4. Reliable Computer Hardware and Networking

As soon as the *Student Information System* is ready for a production environment, reliable computer hardware should be in place for running the application. In a small office (up to 5 people), a local area network (LAN), may consist of one desktop computer (*Client*) per user, with the database resident on one of the client computers. With this approach, some initial cost savings can be achieved over a plan that includes a server and appropriate software. However, since other applications may benefit substantially from the addition of a server to the network, and ultimately that form of network will be a requirement, it is wise to give consideration to initial installation of a LAN, purchase of a server, and implementation of the *Student Information System on the LAN*, where it will ultimately reside.

The primary concerns in the purchase of this computer hardware are its reliability, serviceability, and ease of maintenance. Needless to say, in a service company, quality of service is severely impacted by periodic unplanned inaccessibility of data.

5. Computer Anti-Virus Protection

An analysis of available anti-virus software, and inclusion of such in your initial installation, is mandatory. The cost of such software is very low both in absolute terms as well as in terms of the protection it affords. Often the computer hardware may already be equipped with high quality anti-virus software by the manufacturer. In such cases the task reduces to devising a meaningful scanning schedule.

6. Reliable Email

While individual users can communicate with one another using AOL Web Mail for as little as $4.95 per month, the Bulk Email required as part of a marketing effort, exemplified by the notification of prospects of an Open House event, is not practical without a fully implemented version of MS Outlook, operating through a server running MS Exchange or equivalent. An ancillary benefit of the of an Email software installation is virtual instantaneous internal written communication, including audible annunciation of incoming email.

7. Document Imaging Capability

With the ever-decreasing cost of computer disk storage, and the high speed and reliability of today's document scanners, document imaging capability and its application in our modern office environment is worthy of serious study with respect to intermediate-term data storage.

One example of an application of this technology is the smoothing of peaks in data entry situations. Given a hypothetical application, four pages in length, normally entered into a database in a dedicated hour by an experienced data-entry clerk, it can be scanned in a few seconds using document imaging technology, then sent to safe storage immediately as part of a disaster recovery plan. The database record, designed for future expansion, is then loaded with key data elements from the stored image. Those elements not required to reside in the database record (e. g. for future manipulation) can be subsequently viewed from the stored image, which is instantly recallable. When hard copy is needed, it can be printed from the stored image, obviating storage in bulky file cabinets.

8. Financial Aid Support Software

Funders now provide loan delivery support to the typical educational institution to the extent that *roster files* downloaded by the institution from the Internet are converted into machine-readable counterparts, using an application entitled *WhizKid,* industry-wide. If you wish to keep track of your finances electronically, you will need to be able to convert the counterpart *roster file* into the format in which you maintain your data. Such conversion applications, although uncomplicated and straightforward in nature, are not bought "off the shelf" and form an integral part of the educational institution's software library.

9. Miscellaneous Other Applications

One example of other applications based on data collected in the *Student Information System* database is the federal requirement for annual reporting to the IRS of payments to the University by individuals. Within one month of the end of the calendar year, the reporting entity is required to (a) send to the student a summary of payments on IRS Form 1098-T and subsequently (currently by April 1), to (b) transmit electronically a list of students from whom such payments were received. Penalties are assessed by the IRS for failure to meet those reporting requirements.

While there exist service organizations that supply this service based on data developed by the reporting entity, experience has shown that there are advantages in keeping this function "in-house".

Another such application synchronizes data maintained on campus with that maintained at the main Administrative Office in New York. An example of the importance of this functionality is the case where a student's Billing or Permanent Address changes from the time his/her application is completed, as is often the case. Synchronization software seamlessly integrates these changes into the Student's database records.

Summary and Conclusion

There have been described a number of areas of Information Technology very significant to the University, worthy of further study and in one or more cases, prompt action.

It should be clear that the benefits of a *Student Information System* and of a *Prospect Information System* warrant additional study and definition, at which point costs can be estimated with a reasonable level of accuracy. Some interaction will be required with members of the University to determine what data will be collected by each system and the source of that data. It is reasonable to expect that Items 4, 5 and 6 can be dealt with at a relatively modest cost for study. Item 6, on the other hand, will require more interaction with the University and study of Vendors' offerings. Item 9 was included for informational purposes; it would be premature to explore that item further at present.

The Presenter's recommendations are noted in the accompanying letter.